

**IN THE CLAIMS:**

1. (Previously presented) A method, operable in a data processing system having a host, for performing an input/output transaction, comprising:  
    sending a memory address of a request to an adapter, via a first remote direct memory access over a network;  
    retrieving the request from the host, under the control of the adapter, via a second remote direct memory access over the network; and  
    initiating, under the control of the adapter, a remote direct memory access transfer with the host, responsive to the request.
2. (Original) The method of claim 1, wherein the transfer includes the adapter's reading memory from the host.
3. (Original) The method of claim 1, wherein the transfer includes the adapter's writing to memory of the host.
4. (Original) The method of claim 1, wherein the request includes remote direct memory access parameters.
5. (Original) The method of claim 4, wherein the remote direct memory access parameters include at least one of a transaction ID, a list of request and data remote memory data segments, a type of storage command, an identification of a storage device, an address on a storage device, and a data length.
6. (Previously presented) The method of claim 1, further comprising:  
    receiving a confirmatory response from the adapter, via a third remote direct memory access over the network.
7. (Previously presented) A method, operable in a data processing system having an adapter, for performing an input/output transaction, comprising:

receiving, over a network via a first remote direct memory access, the address of a request from a host;

retrieving, over the network via a second remote direct memory access, the request; and

performing a remote direct memory access transfer with the host, based on the request.

8. (Original) The method of claim 7, wherein the transfer includes reading memory from the host.
9. (Original) The method of claim 8, further comprising:  
writing data read from the memory to a storage device.
10. (Original) The method of claim 7, wherein the transfer includes writing to memory of the host.
11. (Original) The method of claim 10, further comprising:  
reading, from a storage device, data to be written to the memory.
12. (Original) The method of claim 7, wherein the request includes remote direct memory access transfer parameters.
13. (Previously presented) The method of claim 12, wherein the remote direct memory access transfer parameters include at least one of a transaction ID, a list of request and data remote memory data segments, a type of storage command, an identification of a storage device, an address on a storage device, and a data length.
14. (Previously presented) The method of claim 7, further comprising:  
sending a confirmatory response, over the network via a third remote direct memory access, to the host.

15. (Previously presented) A computer program product in a computer readable medium for execution in a data processing system having a host, comprising instructions for:

    sending a memory address of a request to an adapter, via a first remote direct memory access over a network;

    retrieving the request from the host, under the control of the adapter, via a second remote direct memory access over the network; and

    initiating, under the control of the adapter, a remote direct memory access transfer with the host, responsive to the request.

16. (Original) The computer program product of claim 15, wherein the transfer includes the adapter's reading memory from the host.

17. (Original) The computer program product of claim 15, wherein the transfer includes the adapter's writing to memory of the host.

18. (Original) The computer program product of claim 15, wherein the request includes remote direct memory access transfer parameters.

19. (Previously presented) The computer program product of claim 18, wherein the remote direct memory access transfer parameters include at least one of a transaction ID, a list of request and data remote memory data segments, a type of storage command, an identification of a storage device, an address on a storage device, and a data length.

20. (Previously presented) The computer program product of claim 15, comprising additional instructions for:

    receiving, via a third remote direct memory access over the network, a confirmatory response from the adapter.

21. (Previously presented) A computer program product in a computer readable medium for execution in a data processing system having an adapter, comprising instructions for:
- receiving, over a network via a first remote direct memory access, the address of a request from a host;
  - retrieving, over the network via a second remote direct memory access, the request; and
  - performing a remote direct memory access transfer with the host, based on the request.
22. (Original) The computer program product of claim 21, wherein the transfer includes reading memory from the host.
23. (Original) The computer program product of claim 22, comprising additional instructions for:
- writing data read from the memory to a storage device.
24. (Original) The computer program product of claim 21, wherein the transfer includes writing to memory of the host.
25. (Original) The computer program product of claim 24, comprising additional instructions for:
- reading, from a storage device, data to be written to the memory.
26. (Original) The computer program product of claim 21, wherein the request includes remote direct memory access transfer parameters.
27. (Previously presented) The computer program product of claim 26, wherein the remote direct memory access transfer parameters include at least one of a transaction ID, a list of request and data remote memory data segments, a type of storage command, an identification of a storage device, an address on a storage device, and a data length.

28. (Previously presented) The computer program product of claim 21, further comprising:  
sending, over the network via a third remote direct memory access, a confirmatory response to the host.
29. (Previously presented) A data processing system comprising:  
a bus system;  
a processing unit connected to the bus system, wherein the processing unit includes at least one processor;  
a memory;  
a host channel adapter in connection with a system area network; and  
a set of instructions in the memory,  
wherein the processing unit executes the set of instructions to perform the acts of:  
sending a memory address of a request to an adapter, via a first remote direct memory access over a network;  
retrieving the request from the host, under the control of the adapter, via a second remote direct memory access over the network; and  
initiating, under the control of the adapter, a remote direct memory access transfer with the host, responsive to the request.
30. (Previously presented) The data processing system of claim 29, wherein the transfer includes the adapter's reading the memory.
31. (Previously presented) The data processing system of claim 29, wherein the transfer includes the adapter's writing to the memory.
32. (Original) The data processing system of claim 29, wherein the request includes remote direct memory access transfer parameters.
33. (Previously presented) The data processing system of claim 32, wherein the remote direct memory access transfer parameters include at least one of a transaction ID,

a list of request and data remote memory data segments, a type of storage command, an identification of a storage device, an address on a storage device, and a data length.

34. (Previously presented) The data processing system of claim 29, wherein the processing unit performs the additional act of:

receiving, via a third remote direct memory access over the network, a confirmatory response from the adapter.

35. (Previously presented) A data processing system comprising:

a bus system;

a processing unit connected to the bus system, wherein the processing unit includes at least one processor;

a first memory;

a target channel adapter in connection with a system area network; and

a set of instructions in the first memory,

wherein the processing unit executes the set of instructions to perform the acts of:

receiving, over a network via a first remote direct memory access, the address of a request from a host;

retrieving, over the network via a second remote direct memory access, the request; and

performing a remote direct memory access transfer with the host, based on the request.

36. (Original) The data processing system of claim 35, wherein the transfer includes reading a second memory from the host.

37. (Original) The data processing system of claim 36, wherein the processing unit performs the additional act of:

writing data read from the second memory to a storage device.

38. (Original) The data processing system of claim 35, wherein the transfer includes writing to a second memory of the host.

39. (Original) The data processing system of claim 38, wherein the processing unit performs the additional act of:

reading from a storage device data to be written to the second memory.

40. (Original) The data processing system of claim 35, wherein the request includes remote direct memory access transfer parameters.

41. (Previously presented) The data processing system of claim 40, wherein the remote direct memory access transfer parameters include at least one of a transaction ID, a list of request and data remote memory data segments, a type of storage command, an identification of a storage device, an address on a storage device, and a data length.

42. (Previously presented) The data processing system of claim 35, wherein the processing unit performs the additional act of:

sending, over the network via a third remote direct memory access, a confirmatory response to the host.